

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 2

IN THE MATTER OF:

Ringwood Mines/Landfill Superfund
Site
Passaic County, New Jersey

and

the Borough of Ringwood,
Respondent.

UNILATERAL ADMINISTRATIVE
ORDER FOR REMEDIAL
INVESTIGATION AND FEASIBILITY
STUDY

U.S. EPA Region 2
CERCLA Docket No. 02-2010-2026

Proceeding Under Section 106(a) of the
Comprehensive Environmental
Response, Compensation, and Liability
Act, as amended, 42 U.S.C. §§ 9606(a).

UNILATERAL ADMINISTRATIVE ORDER
FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AT THE
RINGWOOD MINES/LANDFILL SUPERFUND SITE

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UNILATERAL ADMINISTRATIVE ORDER
FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AT THE
RINGWOOD MINES/LANDFILL SUPERFUND SITE

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order ("Order") is issued by the United States Environmental Protection Agency ("EPA") to the Borough of Ringwood ("Respondent"). The Order concerns the preparation and performance of a remedial investigation and feasibility study ("RI/FS") for four areas of concern ("ACs") at the Ringwood Mines/Landfill Superfund Site located in the Borough of Ringwood, Passaic County, New Jersey ("Site"): the Peters Mine Pit Area, the Cannon Mine Pit Area, the O'Connor Disposal Area and Site-related groundwater.

2. This Order is issued to Respondent under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended, ("CERCLA") 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. This authority was further redelegated on November 23, 2004, by the Regional Administrator of EPA Region 2 to the Director of the Emergency and Remedial Response Division.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the New Jersey Department of Environmental Protection on February 24, 2005, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and/or State trusteeship.

II. PARTIES BOUND

4. This Order shall apply to and is binding upon Respondent and its agents, successors and assigns. Any change in ownership or legal status of the Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter the Respondent's responsibilities under this Order.

5. Respondent shall provide a copy of this Order to any successors or

assigns prior to transfer of ownership rights to any of the property it owns at the Site. Respondent shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Order, within 14 days after the effective date of this Order or the date of retaining their services, whichever is later. Respondent shall condition any such contracts upon satisfactory compliance with this Order. Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Order, and for ensuring that its employees, contractors, consultants, subcontractors and agents comply with this Order.

6. Until the completion of the Work required by this Order, Respondent shall provide a copy of this Order to any prospective owners before assets or property rights for Site properties are transferred by Respondent to a prospective owner.

III. STATEMENT OF PURPOSE

7. The objectives of this Order are (a) to determine the nature and extent of contamination and any threat to public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Peters Mine Area, the Cannon Mine Pit Area, the O'Connor Disposal Area and Site-related groundwater contamination, by conducting Remedial Investigations as more specifically set forth in the Statement of Work ("SOW") attached as Appendix A to this Order; (b) to identify and evaluate remedial alternatives to prevent, mitigate or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the following discrete ACs: the Peter's Mine Area AC, the O'Connor Disposal Area AC, the Cannon Mine Pit Area AC and the Site-related groundwater contamination AC, by conducting Feasibility Studies as more specifically set forth in the SOW in Appendix A to this Order; and (c) to ensure that the Respondent fully participates and cooperates with the Ford Motor Company ("Ford") in performing the work required by Administrative Settlement Agreement and Order on Consent, Index No. CERCLA-02-2010-2020, which Ford entered into with EPA on May 24, 2010 (the "2010 Order") and which work is currently being performed by Ford.

8. The Work conducted under this Order is subject to approval by EPA and shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"). Respondent shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidance, policies, and procedures.

IV. DEFINITIONS

9. Unless otherwise expressly provided herein, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Order or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "2010 Order" shall mean Administrative Settlement Agreement and Order on Consent, Index No. CERCLA-02-2010-2020, which Ford Motor Company entered into with EPA in May 2010.

b. "Borough" shall mean the Borough of Ringwood, a municipality established under the laws of the State of New Jersey in Passaic County, New Jersey.

c. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.

d. "Cannon Mine Pit Area AC" shall mean that area of concern which is located approximately 1,500 feet west of Peters Mine Road, 50 feet south of Van Dunk Lane, and 400 feet north of Horse Shoe Bend Road, as depicted generally on the map attached as Appendix B to this Settlement Agreement.

e. "Day" shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

f. "Effective Date" shall be the effective date of this Order as provided in Section XXIII.

g. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

h. "Ford" shall mean Ford Motor Company.

i. "Institutional controls" shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements,

and well drilling prohibitions.

j. "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "NJDEP" shall mean the New Jersey Department of Environmental Protection and any successors.

l. "O'Connor Disposal Area AC" shall mean that area of concern east of Peters Mine Road and approximately 300 feet southeast of the Peters Mine Pit Area, as depicted generally on the map attached as Appendix B to this Settlement Agreement.

m. "Order" shall mean this Order, the SOW, all appendices attached hereto (listed in Section XXII) and all documents incorporated by reference into this document including without limitation EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Order upon approval by EPA. In the event of conflict between this Order and any appendix or other incorporated documents, this Order shall control.

n. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

o. "Peter's Mine Area AC" shall mean that area of concern immediately northwest of the northern end of Peters Mine Road and located at the head of a small valley drained by Park Brook, as depicted generally on the map attached as Appendix B to this Settlement Agreement.

p. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, et seq.

q. "Respondent" shall mean the Borough of Ringwood.

r. "Section" shall mean a portion of this Order identified by a Roman numeral.

s. "Site" shall mean the Ringwood Mines/Landfill Superfund Site, located in the Borough of Ringwood, Passaic County, New Jersey, and which is depicted generally on the map attached as Appendix B.

t. "SOW" shall mean the Statement of Work for development of the Remedial Investigation/Feasibility Study for the Site, as set forth in Appendix A to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order as are any modifications made thereto in accordance with this Order.

u. "State" shall mean the State of New Jersey.

v. "Waste Material" shall mean; (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27), as well as any mixtures containing items 1 through 3 listed above.

w. "Work" shall mean all activities Respondent is required to perform under this Order, except those required by Section XVI (Retention of Records).

V. EPA FINDINGS OF FACT

10. The Ringwood Mines/Landfill Site ("the Site") is located in the Borough of Ringwood, Passaic County, New Jersey. The Site includes approximately 50 residential properties, an inactive municipal landfill, abandoned mine shafts (nearly all of which have been sealed) and filled mine pits, an industrial refuse disposal area, small surficial dumps, a municipal recycling center and a rugged, forested area within the Ringwood State Park. The Site lies within the watershed of the Wanaque Reservoir, which supplies drinking water to much of northern New Jersey.

11. In 1965, the Ringwood Realty Corporation ("RRC"), a subsidiary of Ford, purchased over 800 acres within the Borough, including the real property which now constitutes the Site.

12. In 1967, RRC entered into agreements with the O'Connor Trucking and Haulage Corporation ("O'Connor") to dispose of Waste Material from the Ford automobile assembly plant located in Mahwah, New Jersey ("Ford waste"). O'Connor continued to dispose of Ford wastes at the Site until 1971.

13. The Borough was aware of and did not object to O'Connor's disposal activities at the Site. The Borough also disposed of municipal Waste Material in one or more of the areas of the Site and allowed the Town of West Milford to dispose of municipal waste at the Site.

14. On November 4, 1970, the Ringwood Solid Waste Management Authority ("RSWMA"), an agency of the Borough, acquired 289.9 acres of the Site by Deed of Gift from RRC. The RSWMA conveyed that property to the Borough in 1981. The Borough of Ringwood currently owns nearly all that acreage, as well as 35.475 acres which were originally deeded by RRC to the Housing Operation with Training Opportunity, a New Jersey not-for-profit corporation.

15. The RSWMA allowed O'Connor to continue to dispose of Ford Waste Material on its newly acquired property for at least six months. From November 1970 through approximately 1976, the RSWMA and the Borough also used portions of the Site to dispose of Waste Material from the Borough and the Town of West Milford. In some areas of the Site, municipal Waste Material is intermingled or layered with Ford Waste Material. Municipal Waste Material is known to contain hazardous substances from residential and commercial sources. Additionally, minutes from a Borough Council meeting in 1969 indicate that the Borough became aware at that time that a waste hauler was dumping materials in the "Mine Area." The dumping apparently continued until April 1971 when the Borough Board of Health ordered the hauler to cease dumping at the Site. Other evidence indicates that the hauler was pumping industrial sludge which contained hazardous substances, including chromium, into the Cannon Mine during this time.

16. Unpermitted and unauthorized disposal of Waste Materials unrelated to the Ford waste has occurred for many years on portions of the Site currently owned by the Borough. In some areas of the Site, these Waste Materials are intermingled or layered with Ford waste.

17. In 1982, NJDEP sampled groundwater and surface water at the Site and found volatile organic compounds as well as lead and arsenic. In 1983, after receiving the sampling data and risk information, EPA added the Site to the National Priorities List ("NPL") pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605.

18. Between 1984 and 1988, Ford, under EPA oversight, conducted various investigations of the nature and extent of the contamination at the Site and conducted feasibility studies of the remedial alternatives to address the contamination. The hazardous substances detected in the waste included lead, arsenic, chromium, naphthalene, toluene, ethylbenzene, xylene, trichloroethene, and low levels of PCBs. As required by EPA, Ford prepared an FS and a Risk Assessment for the Site. The Risk Assessment indicated that lifetime ingestion of arsenic, lead and thallium from the groundwater posed unacceptable risks to persons at the Site. The Risk Assessment also indicated that exposure to soils and surface water at the Site did not pose an unacceptable risk to public health and the environment.

19. EPA issued a Record of Decision ("ROD") for the Site on September 29, 1988. Ford thereafter conducted additional investigations and sampling and implemented long term monitoring of the groundwater and surface water as required by the ROD.

20. In 1990, EPA formally notified the Borough that it was a potentially responsible party for response costs at the Site under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). The Borough was then, and is now, the owner of a large part of the Site and acquired the property with knowledge that industrial waste from Ford's Mahwah plant had been disposed of at the Site. The Borough, through its agent, RSWMA, also owned and operated a portion of the Site during a six month period when Waste Materials from Ford's Mahwah facility were disposed of at the Site.

21. In 1993, Ford and the Borough entered into a Consent Decree wherein each agreed to pay EPA for certain costs which had been incurred by EPA.

22. In 1993, EPA published a Notice of Intent to Delete the Site from the National Priorities List. In November 1994, after giving public notice of the intent to delist the Site, and with the concurrence of NJDEP, EPA formally deleted the Site from the NPL.

23. After 1989, Ford returned to the Site at the request of residents and/or Borough officials to voluntarily remove additional paint sludge and drums. In 1990, Ford removed 51 drum remnants and 727 tons of additional paint sludge and soil from the O'Connor Disposal Area. In 1995, Ford removed 5 cubic yards of paint sludge from a residential property. In 1998, Ford removed 30 cubic yards of paint sludge from the hillside adjacent to the O'Connor Disposal Area.

24. In 2004, certain residents of the Borough, through their attorney, notified EPA in 2004 that some paint sludge and other Waste Material remained at the Site. At EPA's request, Ford later conducted a Site survey which indicated paint sludge existed in several locations, including the Cannon Mine area of the Site and the O'Connor Disposal area. The Borough is the current owner of both the O'Connor Disposal area and a large part of the Cannon Mine area. The paint sludge found at the Site contained lead, arsenic, chromium, naphthalene, toluene, ethylbenzene, xylene, trichloroethene, and low levels of PCBs.

25. In September 2005, EPA and Ford entered into an Administrative Order on Consent and Settlement Agreement for Investigative Work ("2005 AOC") under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622, in which, among other activities, Ford agreed to undertake a thorough reinvestigation of the Site because significant amounts of additional Waste

Materials containing hazardous substances had been found at the Site ("2005 AOC Work"). Some Waste Materials were identical to those identified in Paragraph 18 which were found during the original RI and during earlier removal actions. From 2005 through the present, Ford removed over 46,000 tons of paint sludge and associated soil, and drum remnants, from twelve disposal areas at the Site.

26. After participating in preliminary negotiations with EPA, the Borough declined to enter into the 2005 AOC. As a result, in September 2005, EPA issued a Unilateral Administrative Order ("UAO") to the Borough under Section 106 of CERCLA, 42 U.S.C. § 9606(a). The UAO obligated the Borough to cooperate and participate in the performance of the 2005 AOC Work with Ford or, in lieu of performance, assume financial responsibility with Ford for the 2005 AOC work. Ford has informed EPA that the Borough has not participated in the 2005 AOC work, nor has the Borough assumed financial responsibility for the 2005 AOC work. The Borough indicates that, while it was unable to reach a settlement with Ford, the Borough complied with the UAO by negotiating in good faith with Ford.

27. The hazards posed by the Site include, but are not limited to, the threat of dermal contact with, inhalation, and/or ingestion of hazardous substances at the Site and the threat of migration of hazardous substances at and from the Site. Exposure to the various hazardous substances present at the Site by dermal contact, inhalation, or ingestion may cause a variety of adverse human health effects.

28. In early 2010, EPA requested that Ford and the Borough enter negotiations in order to reach a settlement pursuant to which Ford and the Borough would perform investigations relating to four (4) specific areas of concern at the Site. After negotiations ended, Ford entered the 2010 Order with EPA and agreed to finance and perform those investigations. The Borough, however, decided not to enter that 2010 Order with EPA. Since May 2010, Ford has started performing the work required by the 2010 Order. EPA is not aware of any assistance which the Borough has provided to Ford while Ford performs the work required by the 2010 Order to date.

VI. EPA CONCLUSIONS OF LAW

Based on the Findings of Fact set forth above, EPA has concluded that:

29. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

30. Many of the chemicals and contaminants found at the Site identified in the Findings of Fact above, including lead, arsenic, chromium, naphthalene,

toluene, ethylbenzene, xylene, trichloroethene, and PCBs, are "hazardous substances" as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

31. The disposal of hazardous substances at the Site, the presence of hazardous substances in soil at the Site and the potential migration of hazardous substances in the soil and/or into groundwater at the Site constitute a "release" and/or "threatened release" of a hazardous substance within the meaning of those terms as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

32. The Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

33. The Respondent is a responsible party under Section 107 of CERCLA, 42 U.S.C. § 9607. The Respondent is also a person who is liable under one or more subsections of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a)(1).

VII. DETERMINATIONS

34. Based on the Findings of Fact and Conclusions of Law set forth above and the entirety of the administrative record, the Director of the Emergency Response and Remedial Division has determined that the release or threatened release of hazardous substances at and from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606 (a).

35. The actions required by this Order are necessary to protect the public health, welfare or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

36. EPA has determined that Respondent is qualified to conduct the Remedial Investigation/Feasibility Study within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) of CERCLA, 42 U.S.C. § 9604(a), if Respondent complies with the terms of this Order.

VIII. NOTICE TO THE STATE

37. Notice of this Order has been given to the New Jersey Department of Environmental Protection on July 20, 2010, pursuant to Section 106(a) of CERCLA, 42 U.S.C. 9606(a).

IX. ORDER

38. Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, it is hereby Ordered that Respondent shall comply with all provisions of this Order, including, but not limited to, all appendices to this Order and all documents incorporated by reference into this Order.

X. PARTICIPATE AND COOPERATE

39. On May 24, 2010, EPA entered into Administrative Settlement Agreement and Order on Consent, Index No. CERCLA-02-2010-2020 with Ford Motor Company, which requires Ford to conduct the same response actions as those required by this Order. Respondent shall make best efforts to coordinate with Ford. Best efforts to coordinate shall include, at a minimum:

a. Communicating in writing within ten days of the effective date of this Order to Ford stating that Respondent desires to comply with this Order and to participate in the performance of the Work or in lieu of performance, to pay for the performance of the Work;

b. Submitting within 20 days of the effective date of this Order a good-faith offer to Ford to perform the Work in whole or in part or, in lieu of performance, to pay for the Work, in whole or in part; and

c. Engaging in good-faith negotiations with Ford to perform or, in lieu of performance, to pay for the Work required by this Order if Ford refuses Respondent's first offer.

40. To the extent that Ford is performing or has stated an intent to perform any Work required by this Order, pursuant to any other order or agreement with EPA, Respondent shall make best efforts to participate in the performance of the Work with Ford. Best efforts to participate shall include, at a minimum:

a. Performance of those portions of the Work as agreed by Respondent and Ford to be undertaken by Respondent, and

b. Payment of all amounts as agreed by Respondent and Ford to be paid by Respondent if, in lieu of performance, Respondent has offered to pay in whole or in part for the Work required by this Order,

41. Respondent shall provide EPA with notice of its intent to comply with this Order, consistent with Paragraph 102 below. In addition, Respondent shall

notify EPA in writing within five days of the rejection, if any, by Ford of Respondent's offer to perform or, in lieu of performance, to pay for a reasonable share of the Work.

42. The undertaking or completion of any requirement of this Order by any other person, with or without the participation of Respondent, shall not relieve Respondent of its obligation to perform each and every other requirement of this Order.

43. Any failure to perform, in whole or in part, any requirement of this Order by any other person with whom Respondent is coordinating or participating in the performance of such requirement shall not relieve Respondent of its obligation to perform each and every requirement of this Order.

XI. WORK TO BE PERFORMED

44. The Work to be performed under this Order consists of performing the remedial investigations and feasibility studies for the four ACs described in Paragraph 1, and completing the 2005 Work, as specified in the SOW. This Order does not apply to, or address any actions to remove or remediate Waste Materials or other hazardous substances, pollutants or contaminants that are identified in connection with the RI/FS that is undertaken in connection with this Order.

45. The Work conducted under this Order is subject to approval by EPA and that Work shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"). Respondent shall conduct all Work under this Order in compliance with CERCLA, the NCP, and all applicable EPA guidances, policies, and procedures.

46. Selection of Contractors, Personnel. All Work performed under this Order shall be under the direction and supervision of qualified personnel. Ford has already begun the Work which is the subject of this Order and, therefore, Respondent shall coordinate with Ford as to the selection of the Project Coordinator and other contractors used to perform the Work under this Order.

47. EPA has designated Joseph Gowers, of the Emergency Response and Remedial Division, Region 2, as its Remedial Project Manager ("RPM"). EPA will notify Respondent of a change of its designated RPM. Except as

otherwise provided in this Order, Respondent shall direct all submissions required by this Order to the RPM. Submissions shall be sent to:

Joseph Gowers, Project Manager
Ringwood Mines/Landfill
Superfund Site U.S. EPA
Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

48. EPA's RPM shall have the authority lawfully vested in an RPM by the NCP. In addition, EPA's RPM shall have the authority consistent with the NCP to halt any Work required by this Order, and to take any necessary response action when he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA RPM from the area under study pursuant to this Order shall not be cause for the stoppage or delay of Work.

49. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS as required by Section 104(a) of CERCLA, 42 U.S.C. 9604(a). This person shall have the authority to observe Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

50. Activities and Deliverables. Respondent shall conduct activities and submit plans, reports or other deliverables as provided by the attached SOW, which is incorporated by reference. All Work shall be conducted in full accordance with the provisions of the Order, the SOW, CERCLA, the NCP and EPA guidance, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive #9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance) and guidance referenced therein, and guidances referenced in the SOW, as may be amended or modified by EPA. All Work performed under the SOW, and pursuant to this Agreement shall conform to EPA's Region 2 "Clean and Green Policy" which may be found at <http://www.epa.gov/region02/superfund/green/remediation/policy.html>. The general activities that Respondent is required to perform are identified below. The tasks that Respondent must perform are described more fully in the SOW and guidances. All Work performed under this Order shall be in accordance with the schedules herein or established in the SOW. In accordance with the schedules established in this Order or in the SOW, Respondent shall submit to EPA 4 copies of all plans, reports and other deliverables required under this Order and the SOW. Respondent shall also provide EPA with an electronic copy of all plans, reports and other deliverables required under this Order and the SOW, and 4 extra copies of all diagrams, figures and/or drawings incorporated into these deliverables. At the

same time, Respondent shall submit to NJDEP 3 copies of all plans, reports and other deliverables required under this Order and the SOW. All plans, reports and other deliverables will be reviewed and approved by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions). Upon EPA's request, Respondent shall also provide copies of draft final plans, reports or other deliverables to Community Advisory Groups, and any other entities as directed by EPA.

a. Remedial Investigation Report. Ford has submitted Technical Memoranda for the Peters Mine Pit Area, the Cannon Mine Pit Area and the O'Connor Disposal Area for EPA review and approval, pursuant to the 2005 AOC. Within 30 days of EPA's approval of the Technical Memorandum for each of the ACs addressed by this Order, or within 30 days of the Effective Date of the Administrative Settlement Agreement and Order on Consent, Index No. CERCLA-02-2010-2020, whichever is later, Respondent shall submit draft RI Reports to EPA for each AC, in accordance with the SOW, this Order, and EPA guidance, including, without limitation, EPA's Region 2 RI Report Guidelines. Within 30 days of receiving EPA's comments on a draft RI Report, Respondent shall submit a final RI Report for EPA review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions).

b. Community Relations Plan. EPA has prepared a community relations plan in accordance with EPA guidance and the NCP. At EPA's request, Respondent shall provide information supporting EPA's community relations plan and shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

c. Baseline Human Health Risk Assessment. Respondent shall submit a Pathway Analysis Report ("PAR") for each AC to EPA within sixty (60) days of Respondent's receipt of the last set of validated data for that AC, or within 30 days of the date of this Order, whichever is later. The PARs must meet the requirements for preparation of PARs specified in the SOW. The PARs will also be subject to the review, modification and approval requirements set forth in the SOW. Within sixty (60) days of EPA approval of a PAR for an AC, Respondent shall submit a draft Baseline Human Health Risk Assessment for that AC for EPA. Respondent will perform the Baseline Human Risk Assessments in accordance with the requirements specified in the 2005 AOC and applicable EPA guidance, including but not limited to the "Interim Final Risk Assessment Guidance for Superfund, Volume 1- Human Health Evaluation Manual (Part A)," (RAGS, EPA-540-1-89-002, OSWER Directive 9285.7-01D, January 1998).

d. Baseline Ecological Risk Assessment. Respondent shall submit a Screening Level Ecological Risk Assessment ("SLERA") for each AC to EPA within sixty (60) days of Respondent's receipt of the last set of

validated data for that AC, or within thirty (30) days of the date of this Order, whichever is later. SLERAs shall meet the requirements for preparation in the SOW and shall be prepared in accordance with applicable EPA guidance, including but not limited to the "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" (ERAS, EPA-540-R-97-006, OSWER Directive 9285.7-25, June 1997) or subsequently issued guidance, and shall be submitted for EPA review and approval. The SLERAs will also be subject to the review, modification and approval requirements set forth in the SOW. EPA will notify Respondent in writing if EPA determines that a full Baseline Ecological Risk Assessment is required for an AC. If so notified by EPA, Respondent shall perform a full Baseline Ecological Risk Assessment in accordance with the SOW, this Order and applicable EPA guidance.

e. Reuse Assessment. If EPA, in its sole discretion, determines that a Reuse Assessment is necessary, Respondent will perform the Reuse Assessment in accordance with the SOW, this Order and applicable EPA guidance, including, but not limited to the "Reuse Assessments: A Tool To Implement The Superfund Land Use Directive," (OSWER Directive 9355.7-06P, June 4, 2001 or subsequently issued guidance). The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for those areas at the Site which EPA instructs Respondent to address in the Reuse Assessment.

f. Feasibility Study Work Plan. Within 30 days of the Effective Date of this Order, or EPA's approval of the Technical Memorandum for each of the ACs addressed by this Order, whichever is later, Respondent shall submit a detailed Work Plan(s) for the completion of Feasibility Studies for the ACs at the Site. Respondent may submit FS Work Plan(s) that address one or more of the ACs addressed by this Order. The FS Work Plan(s) shall be prepared in accordance with the SOW, this Order and applicable EPA guidance. The FS Work Plan(s) shall be submitted for EPA review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions), and upon approval by EPA, the FS Work Plan(s) shall be incorporated into and become enforceable under this Order. Each Feasibility Study shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the AC. The Alternatives evaluated must include, but shall not be limited to the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondent shall address the factors required to be taken into account by Section 121 of CERCLA 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

g. Identification of Candidate Technologies Memorandum. Within 30 days of EPA's approval of the FS Work Plan(s), Respondent shall submit for EPA review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions), an Identification of Candidate Technologies Memorandum in accordance with the SOW and applicable EPA guidance.

h. Development and Screening of Alternatives. Respondent shall develop and evaluate a range of appropriate waste management options that at a minimum ensure protection of human health and the environment. The waste management options developed by Respondent will be evaluated through the development and screening of alternatives in accordance with the SOW, applicable EPA guidance, and the EPA-approved FS Work Plan(s). Within 30 days of EPA's approval of the Baseline Risk Assessment for an AC, Respondent, in accordance with the SOW, this Order and applicable EPA guidance, shall:

(1) Make a presentation to EPA identifying the remedial action objectives and summarizing the development and preliminary screening of remedial alternatives; and

(2) Submit for EPA review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions), a Development and Screening of Remedial Alternatives Technical Memorandum. The memorandum shall include, among other things, remedial action objectives for Engineering Controls as well as for Institutional Controls.

i. Detailed Analysis of Alternatives. Respondent shall conduct a detailed analysis of remedial alternatives, as described in the SOW, applicable EPA guidance and the applicable FS Work Plan. Respondent shall evaluate each remedial alternative against the following nine criteria: (1) overall protection of human health and the environment; (2) compliance with legally applicable or relevant and appropriate requirements; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance.

j. Comparative Analysis. Respondent shall perform a comparative analysis of the remedial alternatives identified for each of the ACs addressed by this Order. The comparative analysis shall be performed in accordance with the SOW and applicable EPA guidance. Respondent shall submit a technical memorandum summarizing the results of the comparative analysis to EPA in accordance with the schedule and/or deadline in the EPA-approved FS Work Plan.

k. Draft Feasibility Study Report. Respondent shall submit to EPA draft and final Feasibility Study Reports for each of the ACs addressed by

this Order. Within 45 days after the presentation to EPA described in Paragraph 50(h)(1), Respondent shall submit for EPA review and approval pursuant to Section XII (EPA Approval of Plans and Other Submissions), a draft FS Report for the applicable ACs in accordance with the SOW, the NCP, applicable EPA guidance, and the EPA-approved FS Work Plan. Within twenty-one (21) days of submitting the draft FS report for each AC, the Respondent shall make a presentation to EPA and NJDEP which shall summarize the findings of the draft FS report and discuss EPA's preliminary comments and concerns associated with the draft FS report. Within twenty-one (21) days of receiving EPA's comments, if any, on the draft FS report, Respondent shall prepare a revised FS that is responsive to the directions in all EPA comments. Respondent shall then submit the revised FS report to EPA for approval pursuant to Section XII (EPA Approval of Plans and Other Submissions) of the Order, unless the Respondent is directed otherwise by EPA in writing. The draft FS Report must reflect the findings in the EPA-approved Baseline Risk Assessments. Respondent shall refer to Table 6-5 of the RI/FS Guidance for report content and format. The draft FS Report shall include: (a) a summary of feasibility study objectives; (b) a summary of remedial action objectives; (c) a discussion of general response actions; (d) an identification and screening of remedial technologies; (e) a description of remedial alternatives; (f) a detailed analysis of remedial alternatives; and (g) a summary and conclusions. Within fourteen (14) days of submitting the draft FS report for each AC, Respondent shall make a presentation to EPA and NJDEP which shall summarize the findings of the draft FS report and discuss EPA's preliminary comments and concerns associated with the draft FS report.

51. The FS Report, as amended, and the administrative record shall provide the basis for the proposed plan under CERCLA Sections 113(k) and 117(a) by EPA, and shall document the development and analysis of remedial alternatives.

52. Upon receipt of the draft FS Report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability and effectiveness of any proposed Institutional and/or Engineering Controls.

53. Modification of the FS Work Plan.

- a. If at any time during the FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the EPA RPM within 14 days of identification.

EPA in its discretion will determine whether the additional data will be collected by Respondent and whether it will be incorporated into reports and deliverables.

b. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA RPM by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In addition to the authorities in the NCP, in the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the FS Work Plan, EPA shall modify or amend the FS Work Plan in writing accordingly. Respondent shall perform the FS Work Plan as modified or amended

c. EPA may determine that in addition to tasks defined in the initially approved FS Work Plan, other additional Work may be necessary to accomplish the objectives of the FS. Respondent agrees to perform these response actions in addition to those required by the initially approved FS Work Plan, including any approved modifications, if EPA determines that such actions are necessary for a complete FS.

d. Respondent shall confirm its willingness to perform the additional Work in writing to EPA within 7 days of receipt of the EPA request. If Respondent objects to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the FS Work Plan or written FS Work Plan supplement. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions at the Site.

54. Off-Site Shipment of Waste Material. Respondent shall, prior to any off-site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to EPA's RPM. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the feasibility study. Respondent shall provide the information required by Subparagraph 54.a and 54.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

55. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, performance, and completion of the Work. In addition to discussion of the technical aspects of the Work, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

56. Progress Reports. In addition to the deliverables set forth in this Order, Respondent shall provide to EPA monthly progress reports by the 10th day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (1) describe the actions which have been taken to comply with this Order during that month, (2) include all descriptions of, and validated data from, sampling and tests and all other data received by Respondent, (3) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for the completion of the FFS, and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

57. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Order, as well as, the Health and Safety Plan approved for the Site, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the EPA RPM or, in the event of his/her unavailability, the Chief of the New York Remediation Branch at (212) 637-4288, and the 24-hour EPA Superfund/Oil Emergency Hotline at (732) 548-8730 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the EPA RPM or the 24-hour EPA Superfund/Oil Emergency Hotline at (732) 548-8730 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, et seq.

XII. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

58. After review of any plan, report or other item that is required to be submitted for approval pursuant to this Order, in a notice to Respondent, EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within 21 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

59. In the event of approval, approval upon conditions, or modification by EPA, pursuant to subparagraph 58. (a), (b), (c) or (e), Respondent shall

proceed to take any action required by the plan, report or other deliverable, as approved or modified by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA.

60. Resubmission.

- a. Upon receipt of a notice of disapproval, Respondent shall, within 21 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval.
- b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for failure to comply with this Order.
- c. Respondent shall not proceed further with any subsequent activities or tasks until receiving EPA approval, approval on condition or modification of the following deliverables: Supplemental Investigations Work Plan(s), Sampling and Analysis Plan(s,) and Draft Supplemental Investigations Report(s). While awaiting EPA approval, approval on condition or modification of these deliverables, Respondent shall proceed with all other tasks and activities which may be conducted independently of these deliverables, in accordance with the schedule set forth under this Order.
- d. For all remaining deliverables not listed above in subparagraph 60.c., Respondent shall proceed with all subsequent tasks, activities and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the Remedial Investigations.

61. If EPA disapproves a resubmitted plan, report or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified or developed by EPA.

62. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately.

63. In the event that EPA takes over some of the tasks, but not the preparation of the Remedial Investigations Report(s), Respondent shall incorporate and integrate information supplied by EPA into the final reports.

64. All plans, reports, and other deliverables submitted to EPA under this Order shall, upon approval or modification by EPA, be incorporated into and enforceable under this Order. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Order, the approved or modified portion shall be incorporated into and enforceable under this Order.

65. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to EPA.

XIII. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

66. Quality Assurance. Respondent shall assure that Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the QAPP and guidances identified therein. Respondent shall assure that field personnel used by Respondent are properly trained in the use of field equipment and in chain of custody procedures. Respondent shall use only laboratories which have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPAJ240/B-01/002, March 2001) or equivalent documentation as determined by EPA.

67. Sampling.

a. All results of sampling, tests, modeling or other data generated by Respondent, or on Respondent's behalf, during the period that this Order is effective, shall be submitted to EPA in the next monthly, progress report as described in Paragraph 56 of this Order. Respondent shall also submit to EPA all raw data as it becomes available. EPA will make available to Respondent validated data generated by EPA unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondent shall verbally notify EPA at least 14 days prior to conducting significant field events as described in the SOWs, Remedial Investigation Work Plan(s) or Sampling and Analysis Plan(s). At EPA's verbal or written request, or the request of EPA's oversight representative, Respondent shall allow split or duplicate samples to be taken by EPA (and its authorized

representatives) of any samples collected in implementing this Order. All split samples of Respondent shall be analyzed by the methods identified in the QAPP.

68. Access to Information.

a. Respondent shall provide to EPA, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA under this Order to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA and the State, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Order for which Respondent assert business confidentiality claims.

c. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information; and (6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring,

hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

69. In entering into this Order, Respondent waives any objections to any data gathered, generated or evaluated by EPA, the State or Respondent in the performance or oversight of the Work that has been verified according to the quality assurance/quality control ("QA/QC") procedures required by the Order or any EPA-approved Supplemental Investigations Work Plans or Sampling and Analysis Plans. If Respondent objects to any other data relating to the Supplemental Investigations, Respondent shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 15 days of the monthly progress report containing the data

XIV. SITE ACCESS AND INSTITUTIONAL CONTROLS

70. If any portion of the Site, or any other property where access is needed to implement this Order, is owned or controlled by the Respondent, the Respondent shall, commencing on the Effective Date, provide EPA, the State, Ford and its representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Order.

71. Where any action under this Order is to be performed in areas not owned by or in possession of someone other than the Respondent, the Respondent shall use its best efforts to obtain all necessary access agreements within 30 days after the Effective Date, or as otherwise specified in writing by the EPA RPM. The Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may either; (i) obtain access for Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate; (ii) perform those tasks or activities with EPA contractors; or (iii) terminate the Order. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondent shall perform all other tasks or activities not requiring access to that property. Respondent shall not be responsible for obtaining access to residential properties for Remedial Investigations. Respondent shall, however, integrate the results of any tasks or activities undertaken by EPA on residential or other properties into its plans, reports and other deliverables.

72. Notwithstanding any provision of this Order, EPA and the State retain

all of their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XV. COMPLIANCE WITH OTHER LAWS

73. Respondent shall comply with all applicable local, state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVI. RETENTION OF RECORDS

74. During the pendency of this Order and for a minimum of 10 years after commencement of response action at this Site pursuant to this Order, the Respondent shall preserve and retain all non-identical copies of documents, records, and other information including documents, records, or other information in electronic form now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after commencement of construction of any response action, Respondent shall also instruct its contractors and agents to preserve all documents, records and other information of whatever kind, nature or description relating to performance of the Work.

75. At the conclusion of this document retention period, Respondent shall notify EPA at least 90 days prior to the destruction of any such documents, records or other information, and, upon request by EPA, Respondent shall deliver any such documents, records, or other information to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: (1) the title of the document, record, or other information; (2) the date of the document, record, or other information; (3) the name and title of the author of the document, record, or other information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or other information; and (6) the privilege asserted by Respondent. However, no documents, records or other information created or

generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

76. As of the effective date of this Order, Respondent shall not alter, mutilate, discard, destroy or otherwise dispose of any records, documents or other information (other than identical copies) relating to its potential liability regarding to the Site. Respondent shall comply fully with any and all additional requests by EPA for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XVII. DELAY IN PERFORMANCE

77. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of this Section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

78. Nothing in this Order shall limit the power and authority of EPA or the United States to take, direct or order all actions necessary to protect public health, welfare or the environment or to prevent, abate or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at or from the Site. Further, nothing shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate, or from requiring the Respondent in the future to perform additional activities pursuant to CERCLA or other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of response costs incurred by the United States related to this Order or the Site.

XVIII. OTHER CLAIMS

79. By issuance of this Order, EPA assumes no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent or Respondent's employees, agents, contractors or consultants in carrying out any action or activity pursuant to this Order or Respondent's failure to perform properly or complete the requirements of this Order. Neither the United States nor EPA may be held out as or deemed a party to any contract entered into by the Respondent or its officers, employees, agents, representatives, assigns, contractors or consultants in carrying out actions pursuant to this Order and Respondent shall not represent to anyone that the United States or EPA is or may be a party to any such contract.

80. Respondent shall save and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action or other costs incurred by the United States including but not limited to attorney fees and other expenses of litigation and settlement arising from or on account of acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on behalf or under their control, in carrying out activities pursuant to this Order, including any claims arising from any designation of Respondent as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e).

81. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation not a Respondent to this Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any hazardous substances, pollutants or contaminants found at, taken to, or taken from the Site.

82. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XIX. INSURANCE

83. At least seven days prior to commencing any on-site Work under this Order, Respondent shall secure, and shall maintain for the duration of this Order, comprehensive general liability insurance with limits of \$3 million and automobile insurance with limits of \$3 million, combined single limit, and shall obtain endorsements on the policies identifying EPA as an additional insured. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Order. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XX. FINANCIAL ASSURANCE

84. Within 30 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$1.5 million in one or more of the following forms, in order to secure the full and final completion of Work by Respondent:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;
- c. a trust fund administered by a trustee acceptable in all respects to EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work; and/or
- e. a corporate guarantee to perform the Work provided by the Respondent, including a demonstration that the Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

85. If Respondent seeks to provide a demonstration of financial assurance under 40 C.F.R. § 264.143(f) and has provided a similar demonstration at other RCRA or CERCLA sites, the amount for which it is providing financial assurance at those sites must be added to the estimated costs of the Work set forth in Paragraph 84. Respondent must provide documentation of any and all prior demonstrations currently in effect.

86. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 84, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance

(otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Order.

87. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to subparagraph 84.e of this Order, Respondent shall; (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143; and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143 annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Order, wherever 40 C.F.R. Part 264.143 references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the current cost estimate of \$1.5 million for the Work at the Site shall be used in relevant financial test calculations.

88. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 84 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by EPA, reduce the amount of the financial security provided under this Section to the estimated cost security after receiving written approval from EPA.

89. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section.

XXI. ENFORCEMENT AND RESERVATIONS

90. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and/or for any other response costs which have been incurred or will be incurred by the United States relating to the Site. This reservation shall include but not be limited to past costs, direct costs, indirect costs, and the costs of oversight, the costs of compiling the cost documentation to support an oversight cost demand, as well as accrued interest as provided in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

91. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), or any other applicable law. Respondent shall be liable under

CERCLA Section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

92. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

93. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

94. Respondent shall be subject to civil penalties under Section 106(b) of CERCLA, 42 U.S.C. § 9606(b), in the event that Respondent willfully violates, or fails or refuses to comply with this Order without sufficient cause. Such civil penalties shall be in an amount not greater than \$37,500 per day, subject to possible further adjustments of this penalty maximum consistent with the Debt Collection and Improvement Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321 (1996), and the regulations promulgated thereunder, including the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, and all amendments thereto. In addition, failure to properly carry out response actions under this Order, or any portion hereof, without sufficient cause, may result in liability under Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by EPA as a result of such failure to take proper action.

95. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

96. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXII. INTEGRATION/APPENDICES

97. This Order and its appendices and any technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), and other deliverables that will be developed pursuant to this Order and become incorporated into and enforceable under this Order constitute the final, complete and exclusive terms of the Order.

"Appendix A" is the SOW.

"Appendix B" is the map of the Site.

XXIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

98. This Order shall be effective ten days after the Order is signed by the Director of the Emergency and Remedial Response Division of Region 2 or his delegatee, unless a conference is timely requested pursuant to Paragraph 102 below. If a conference is timely requested pursuant to Paragraph 102 below, the Order shall become effective five days following the date the conference is held, unless the effective date is modified by EPA. All times for performance of the ordered activities shall be calculated from the effective date established under this paragraph.

99. No informal advice, guidance, suggestion, or comment by the EPA RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall be construed as relieving Respondent of its obligation to obtain any formal approval required by this Order, or to comply with all requirements of this Order, unless it is formally modified.

XXIV. TERMINATION AND SATISFACTION

100. This Order shall terminate when Respondent demonstrates in writing and certifies to the satisfaction of EPA that all activities required under this Order, including any additional Work, have been performed and EPA approves the certification. This notice of termination shall not terminate Respondent's obligation to comply with the Record Retention requirements of the Order.

101. The certification shall be signed by a responsible official representing the Respondent. The official shall make the following attestation:

"To the best of my knowledge, after thorough investigation, I

certify that the information contained in or accompanying this certification is true, accurate, and complete."

XXV. OPPORTUNITY TO CONFER

102. Respondent may, within 15 days of the effective date of the Order, request a conference with EPA to discuss this Order. If requested, the conference shall occur within 7 days of Respondent's request for a conference.

103. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondent may appear in person or by an attorney or other representative.

104. Requests for a conference must be by telephone followed by written confirmation sent by overnight mail and electronic mail that day to:

Frank X. Cardiello
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 17th Floor
New York, N.Y. 10007-1866
Telephone: (212) 637-3148
Telecopy: (212) 637-3096
cardiello.frank@epa.gov

XXVI. NOTICE OF INTENT TO COMPLY

105. Respondent shall provide, not later than fourteen (14) days after the effective date of this Order, written notice to EPA's RPM and Assistant Regional Counsel for the Site at the address specified in Section XXV, stating whether Respondent will comply with the terms of this Order. If Respondent does not unequivocally commit to perform or finance the Work as provided by this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. If applicable, Respondent's written notice shall describe, using facts that exist on or prior to the effective date of this

Order, any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions.

So Ordered, this 22 day of July, 2010.

By: for 

Walter Mugdan, Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
Region 2

APPENDIX A

STATEMENT OF WORK REMEDIAL INVESTIGATION AND FEASIBILITY STUDY RINGWOOD MINES/LANDFILL SITE RINGWOOD, NEW JERSEY

I. INTRODUCTION

1. A supplemental remedial investigation for the Site, referred to as the Supplemental Investigation, was conducted pursuant to the Administrative Order on Consent and Settlement Agreement for Investigative Work, CERCLA Docket Number 02-2005-2013 (2005 AOC). Data collected as part of that Supplemental Investigation resulted in the identification of four areas of concern (ACs) at the Ringwood Mines/Landfill Superfund Site (the Site) identified as: the Peters Mine Pit Area, the O'Connor Disposal Area, the Cannon Mine Pit Area, and Site-Related Groundwater Contamination.

2. The purpose of this remedial investigation and feasibility study (RI/FS) is to investigate the overall nature and extent of contamination and to develop and evaluate potential remedial alternatives to address contamination remaining at each of the ACs at the Site, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). Respondent Ford has completed the scoping activities described in the 2005 AOC, including the Supplemental Investigations Work Plan for the Field Reconnaissance Survey, a Field Sampling Plan and Quality and Assurance Plan, a Site Health and Safety Plan, a Community Relations Plan, and has submitted draft Technical Memoranda for three of the four ACs. Respondents shall complete all of the activities required by the 2005 AOC which had not been completed prior to the Effective Date (2005 Work), including the following for each of the four (4) areas of concern: a Final Technical Memorandum acceptable to EPA, a Final Pathway Analysis Report acceptable to EPA, a Final Baseline Human Health Risk Assessment acceptable to EPA, a Final Ecological Risk Assessment acceptable to EPA a Remedial Investigation Report acceptable to EPA and draft and revised versions of each of the foregoing documents, as set forth in this SOW.

3. The Respondents shall submit a Technical Memorandum for each AC at the Site. The Technical Memorandum for each AC shall incorporate and discuss the data collected during the Supplemental Investigation for each respective AC. Draft Technical Memoranda have been submitted for the Peters Mine Pit Area, the O'Connor Disposal Area and the Cannon Mine Pit Areas of the Site. If EPA disapproves, or requires revisions to a Technical Memorandum, in whole or in part, the Respondents, shall amend and submit to EPA a revised Technical Memorandum which is responsive to the directions in all of EPA's written comments within 21 days of receipt of EPA's comments, unless a different period is specified or agreed to in writing by EPA.

4. The Respondents shall perform a Baseline Human Health Risk Assessment (BHHRA) for the Site. The Respondents shall provide for the preparation of BHHRA

which meet the requirements specified in this SOW for each AC. The Respondents shall adhere to the following schedule for submittal of BHHRA-related deliverables:

- a. Pathway Analysis Reports (PARs) – The Respondents shall prepare and submit PARs for each AC within sixty (60) days after receipt of the last set of validated data generated for the respective AC, or within thirty (30) days of the date of this Settlement Agreement, whichever is later. The PARs must meet the requirements for preparation of PARs specified in the Settlement Agreement. The PARs will also be subject to the review, modification and approval requirements set forth in the Settlement Agreement.
- b. Baseline Human Health Risk Assessment – Within sixty (60) days of EPA approval of a PAR, the Respondents shall submit to EPA a Draft BHHRA for the respective AC. The BHHRAs shall be subject to the review, modification and approval requirements set forth in the Settlement Agreement.

5. The Respondents shall conduct an Ecological Risk Assessment (ERA) for the Site. The Respondents shall provide for the preparation of ERAs which meet the requirements specified in the Settlement Agreement, for each AC. The Respondents shall adhere to the following schedule for submittal of ERA-related deliverables:

- a. Screening Level Ecological Risk Assessment (SLERA) – The Respondents shall prepare and submit SLERAs for each AC within sixty (60) days after receipt of the last set of validated data generated for the respective AC, or within thirty (30) days of the effective date of the Settlement Agreement, whichever is later. The SLERAs shall be subject to the review, modification and approval requirements set forth in the Settlement Agreement.
- b. Full Baseline Ecological Risk Assessment (BERA) – If EPA notifies the Respondents that a full updated Baseline Ecological Assessment is required for an AC, the Respondents shall submit a Scope of Work for the BERA, a draft BERA Report, and a Final BERA Report within the timeframes specified in the Settlement Agreement. All BERA-related submittals must meet the requirements for preparation of these submittals, and will be subject to the review, modification and approval requirements, as set forth in the Settlement Agreement.
- c. Reuse Assessment. If EPA, in its sole discretion, determines that a Reuse Assessment is necessary, Respondents will perform the Reuse Assessment in accordance with applicable EPA guidance, including, but not limited to the "Reuse Assessments: A Tool To Implement The Superfund Land Use Directive," OSWER Directive 9355.7-06P, June 4, 2001 or subsequently issued guidance. The Reuse Assessment should provide sufficient

information to develop realistic assumptions of the reasonably anticipated future uses for those areas at the Site which EPA instructs Respondents to address in the Reuse Assessment.

6. The Respondents shall prepare and submit to EPA a Remedial Investigation (RI) Report, which meets the requirements specified in the Settlement Agreement, for each AC. Each draft RI Report shall be submitted to EPA for review and comment within thirty (30) days of EPA's approval of the required Technical Memoranda which corresponds to the respective AC. Within thirty (30) days of receiving EPA's comments on a draft RI Report, the Respondents shall amend and submit to EPA a final RI Report which is responsive to the directions in all EPA comments.

7. The Respondents shall conduct a FS and shall produce a draft FS report for each AC that is in accordance with this SOW, the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (U.S. EPA, Office of Emergency and Remedial Response, October 1988), and any other guidance that EPA uses in conducting a FS, as well as any additional requirements in the Administrative Order on Consent and Settlement Agreement (Settlement Agreement). The RI/FS Guidance describes the report format and the required report content for the FS. The Respondents shall furnish all necessary personnel, materials, and services needed for, or incidental to, the performance of the FSs, except as otherwise specified in the Settlement Agreement.

8. EPA will be responsible for the selection of the remedy for each AC of the Site and EPA will document the selection of the Remedy in a Record of Decision (ROD). The remedial action selected by EPA will meet the cleanup standards specified in CERCLA Section 121. That is, EPA shall select remedial actions that are protective of human health and the environment, cost-effective, and that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The selected remedy for each AC shall address the statutory preference for treatment as a principal element and shall be in compliance with, or include a waiver of, legally applicable or relevant and appropriate requirements (ARARs) under Federal environmental law, State environmental law or facility siting law. The EPA approved RI and FS reports, the applicable baseline risk assessment and the administrative record will form the basis for the selection of the remedies for each AC of the Site and will provide the information necessary to support the development of the ROD(s).

9. As specified in CERCLA Section 104(a)(1), as amended by SARA, EPA will provide oversight of the activities of Respondents and their contractors throughout the performance of each FS. The Respondents shall support EPA's initiation and conduct of activities related to the implementation of oversight activities.

II. REQUIRED WORK AND SCHEDULE

A. BASELINE HUMAN HEALTH RISK ASSESSMENT

The Respondents shall prepare a Baseline Human Health Risk Assessment (BHHRA) for each AC of the Site. The Respondents shall provide EPA with the following deliverables:

Baseline Human Health Risk Assessment (BHHRA) . This assessment shall include actual and potential cancer risks and non-cancer hazards to human health which are identified and characterized in accordance with CERCLA, the NCP, and EPA guidances including, but not limited to, the RI/FS Guidance, "Land Use in the CERCLA Remedy Selection Process" (OSWER Directive No. 9355.7-04) and the definitions and provisions of "Risk Assessment Guidance for Superfund (RAGS) , " Volume 1, "Human Health Evaluation Manual," (December 1989) (EPA/540/1-89/002).

The assessment shall also include a description of representative contaminants and associated concentrations in Site media including groundwater, soil, sediment, and surface water which have been determined by using all currently available media-specific analytical data generated during the SI.

The information required shall be presented in the following deliverables:

a. Memorandum on Exposure Scenarios and Assumptions. Within 45 days after approval of the SI Work Plan, the Respondents shall submit a memorandum describing the exposure scenarios and assumptions, taking into account for the BHHRA the present and reasonably anticipated future land use of the Site. The memorandum should include appropriate text describing the preliminary conceptual Site model and exposure routes of concern for the Site, and include a completed RAGS Part D Table 1. This table shall describe the pathways that will be evaluated in the BHHRA, the rationale for their selection, and a description of those pathways that will not be evaluated. In addition, the Memorandum shall include a completed RAGS Part D Table 4 describing exposure pathway parameters with appropriate references to EPA's 1991 Standard Default Assumptions and updated guidance developed by EPA. If EPA disapproves of or requires revisions to the memorandum, in whole or in part, it will provide written reasons for the disapproval or directions for revisions to make the submittal approvable. Ford may meet with the Chief of the Branch ("EPA Branch Chief") responsible for the Site in the ERRD, EPA-Region II to discuss any matter(s) relating to the memorandum. Ford shall make the request in writing to EPA and shall set forth the topics and/or issues Ford would like to discuss and what resolution and/or other action(s), if any, Ford is seeking from EPA . The Respondents shall amend and submit to EPA a revised memorandum which is responsive to the directions in all EPA comments, within

twenty-one (21) days of receiving EPA's comments, unless a different period is specified or agreed to in writing by EPA

b. Pathway Analysis Report (PAR). The Respondents shall prepare and submit a PAR for each AC within sixty (60) days after receipt of the last set of validated data for the respective AC. The PARs shall be developed in accordance with OSWER Directive 9285.7-01D-1 dated December 17, 1997 (or more recent version), entitled, "Risk Assessment Guidelines for Superfund Part D" and other appropriate guidance in Appendix 1A and updates thereto. The PARs shall contain all the information necessary for a reviewer to understand how the risks at the Site will be assessed. The PARs shall build on the Memorandum on Exposure Scenarios and Assumptions (see a. above) describing the risk assessment process and how the risk assessment will be prepared. The PARs shall include completed RAGS Part D Tables 2, 3, 5, and 6 as described below. The Respondents shall submit the PARs for EPA review and approval. Respondents must obtain EPA approval of the PAR prior to Respondents' submission of the draft BHHRA.

i. Chemicals of Concern (COCs). The PARs shall contain all the information necessary about the COCs at the Site for a reviewer to understand how the risks at the Site will be evaluated.

A. Based on the data obtained during the SI, the Respondents shall list the hazardous substances present in all sampled media (e.g., groundwater, soils, sediment, etc.) and the contaminants of potential concern (COPCs) as described in the Risk Assessment Guidance for Superfund Part A.

B. Table 2-Selection of COCs. Representative contaminants and associated concentrations in sample media for the PARs shall be determined utilizing all currently available media specific validated analytical data generated during the SI. The selection of COCs shall follow Risk Assessment Guidance for Superfund (Part A) and before chemicals are deleted as COCs they shall be evaluated against the residential PRGs from Region IX. The COCs shall be presented in completed RAGS Part D Table 2 format.

ii. Table 3 - Media Specific Exposure Point Concentrations. Using the chemicals selected in Table 2, this Table shall summarize the Exposure Point Concentrations for all COCs for the various media. The calculation of the Exposure Point Concentration shall follow

the 1992 Guidance Document on the calculation of the 95% Upper Confidence Limit (UCL) on the Mean. In those cases where the 95% UCL exceeds the maximum, the maximum concentration shall be used as the EPC.

iii. Tables 5 and 6 – Toxicological Information. This section of the PARs shall provide the toxicological data (e.g., Cancer Slope Factors, Reference Doses, Reference Concentrations, Weight of Evidence for Carcinogens, and adjusted dermal toxicological factors where appropriate) for the chemicals of concern. The toxicological data shall be presented in completed RAGS Part D Tables 5 and 6. The source of data in order of priority are: EPA's Integrated Risk Information System (IRIS), Health Effects Assessment Summary Tables (HEAST)-1997 and contact with EPA's National Center for Environmental Assessment. To facilitate a timely completion of the PARs, the Respondents shall submit a list of chemicals for which IRIS values are not available to EPA as soon as identified thus allowing EPA to facilitate obtaining this information from EPA's National Center for Environmental Assessment.

iv. If EPA disapproves, or requires revisions to a PAR, in whole or in part, the Respondents, shall amend and submit to EPA a revised PAR which is responsive to the directions in all of EPA's written comments within 21 days of receipt of EPA's comments, unless a different period is specified or agreed to in writing by EPA.

c. Baseline Human Health Risk Assessment

i. Within sixty (60) days of EPA's approval of a PAR, the Respondents shall submit to EPA a Draft BHHRA. The submittal shall include completed RAGS Part D Tables 7 through 10 summarizing the calculated cancer risks and non-cancer hazards and appropriate text in the risk characterization with a discussion of uncertainties and critical assumptions (e.g., background concentrations and conditions). The Respondents shall perform the BHHRA in accordance with the approach and parameters described in the approved Memorandum of Exposure Scenarios and Assumptions and the PAR describe above. Text and tables from these previously approved reports shall be included in the appropriate sections of the BHHRA .

ii. If EPA disapproves or requires revisions to a BHHRA, in whole or in part, it will provide written reasons for the disapproval or directions for revisions to make the

submittal approvable. The Respondents shall amend and submit to EPA a revised report which is responsive to the directions in all EPA comments, within 21 days of receiving EPA's comments, unless a different period is specified or agreed to in writing by EPA.

B. ECOLOGICAL RISK ASSESSMENT

1. Screening-Level Ecological Risk Assessment (SLERA)

Within sixty (60) days after receipt of the last set of validated data for an AC, the Respondents shall submit a Screening-Level Ecological Risk Assessment (SLERA) for the AC in accordance with current Superfund ecological risk assessment guidance (Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments [ERAGSJ, USEPA, 1997 [EPA/540-R-97-0061]). The SLERA shall include a comparison of the maximum contaminant concentrations in each media of concern to appropriate conservative ecotoxicity screening values, and should use conservative exposure estimates. EPA will review and approve the SLERA and determine whether a full updated Baseline Ecological Assessment is required.

2. Full Baseline Ecological Risk Assessment (BERA)

a. If EPA determines that a full updated Baseline Ecological Assessment (BERA) is required for an AC and so notifies the Respondents, the Respondents shall, within thirty (30) days thereafter, submit a Scope of Work outlining the steps and data necessary to perform the BERA, including any amendments to the SI Work Plan required to collect additional relevant data. If EPA disapproves or requires revisions to the BERA Scope of Work, in whole or in part, the Respondents shall amend and submit to EPA a revised Scope of Work that is responsive to the directions in all of EPA's written comments within twenty-one (21) days of receipt of EPA's comments, unless a different period is specified or agreed to in writing by EPA. The BERA Scope of Work shall identify any SI Work Plan amendments or addenda, including establishment of a schedule for review and approval of additional field data.

b. The Respondents shall notify EPA in writing within seven (7) days of completion of all field activities associated with the BERA, as identified in the BERA Scope of Work and performed under the approved SI Work Plan addenda.

c. The Respondents shall prepare a draft BERA Report which identifies and characterizes actual and potential ecological risks in accordance with

CERCLA, the NCP, and EPA guidances including, but not limited to, "Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments," (1997) (EPA/540-R-97-006), E RAGS, dated June 5, 1997, or other most recent guidance.

d. The Draft BERA Report shall include:

1. Hazard Identification (sources). The Respondents shall review available information on the hazardous substances present at the Site and identify the major contaminants of concern.
2. Dose-Response Assessment. The Respondents shall identify and select contaminants of concern based on their intrinsic toxicological properties.
3. Characterization of Site and Potential Receptors. The Respondents shall identify and characterize environmental exposure pathways.
4. Select Chemicals, Indicator Species, and End Points. In preparing the assessment, The Respondents shall select representative chemicals, indicator species (species which are especially sensitive to environmental contaminants), and end points on which to concentrate.
5. Exposure Assessment - The exposure assessment shall identify the magnitude of actual or environmental exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the Respondents shall develop central tendency and reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the Site.
6. Toxicity Assessment/Ecological Effects Assessment. The toxicity and ecological effects assessment shall address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity (e.g., weight of evidence for a chemical's carcinogenicity).

7. Risk Characterization. During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect the environment.

8. Identification of Limitations/Uncertainties. The Respondents shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.

9. Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the Respondents shall develop a conceptual model of the Site.

e. The Respondents shall submit the draft updated BERA Report to EPA within sixty (60) days of obtaining the final set of BERA-related validated data.

f. If EPA disapproves of or requires revisions to the updated BERA Report, in whole or in part, such disapproval or required revisions shall be provided in writing with reasons for the disapproval or directions for revisions to make the submittal approvable. The Respondents shall amend and submit to EPA a final, updated ecological assessment which is responsive to the directions in all EPA comments.

g. Final Baseline Ecological Risk Assessment Report. Within 21 days of receiving EPA's comments on the Draft BERA Report, the Respondents shall amend and submit to EPA a final report for the AC which is responsive to the directions in all EPA comments.

C. REMEDIAL INVESTIGATION REPORTS

a. The Respondents shall prepare an RI Report for each AC, which shall incorporate the results of investigations conducted for the respective AC.

b. The RI Report shall be submitted to EPA within 30 days of EPA's approval of the Technical Memorandum prepared for the associated AC.

D. FEASIBILITY STUDY WORK PLAN(S)

Within thirty (30) days of the Effective Date of the Settlement Agreement, the Respondents shall submit to EPA and NJDEP a FS Work Plan(s) that address all

ACs of the Site work. The FS Work Plan(s) shall include, among other things, a detailed schedule for completion of all FS activities at the four ACs at the Site. The Respondents shall submit the FS Work Plan(s) to EPA for approval pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Settlement Agreement. Within twenty-one (21) days of receipt of EPA's written comments, the Respondents shall prepare a revised FS Work Plan that is responsive to the directions in all EPA written comments. The Respondents shall submit the revised FS Work Plan to EPA for approval pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Settlement Agreement, unless the Respondents are directed otherwise by EPA in writing. Following approval of the FS Work Plan, or modification of it pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Settlement Agreement, the FS Work Plan shall be deemed to be incorporated into and enforceable under the Settlement Agreement.

F. IDENTIFICATION OF CANDIDATE TECHNOLOGIES

An Identification of Candidate Technologies Memorandum shall be submitted by the Respondents within thirty (30) days of EPA's approval or modification of each FS Work Plan pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Settlement Agreement. The candidate technologies identified shall include innovative treatment technologies (as defined in the RI/FS Guidance) where appropriate. The candidate technologies will cover the range of technologies required for alternatives analysis. EPA may provide written comments on the submitted memorandum, in which case the Respondents shall amend and submit to EPA a revised memorandum which is responsive to the directions in all EPA written comments within twenty-one (21) days of receipt of EPA's comments.

G. DEVELOPMENT AND SCREENING OF REMEDIAL ALTERNATIVES

The Respondents shall develop and evaluate a range of appropriate waste management options for each AC that at a minimum ensure protection of human health and the environment. The development and screening of remedial alternatives shall develop an appropriate range of waste management options that will be evaluated. This range of alternatives should include options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; options involving containment with little or no treatment; options involving both treatment and containment; and a no-action alternative. The following activities will be performed as a function of the development and screening of remedial alternatives:

1. Development and Screening of Remedial Alternatives

a. Develop General Response Actions

The Respondents shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination to satisfy the remedial action objective.

b. Identify Areas or Volumes of Media

The Respondents shall identify areas or volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of the four ACS of the site will also be taken into account.

c. Assemble and Document Alternatives

The Respondents shall assemble selected representative technologies into alternatives for each affected medium or AC.

Together, all of the alternatives will represent a range of treatment and containment combinations that will address each AC as a whole. A summary of the assembled alternatives and their related action-specific ARARS will be prepared by the Respondents for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

d. Refine Alternatives

The Respondents shall refine the remedial alternatives to identify contaminant volume addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information will be collected for an adequate comparison of alternatives. Preliminary Remediation Goals (PRGs) for each chemical in each medium will also be modified as necessary to incorporate any new risk assessment information presented in the baseline risk assessment report. Additionally, action-specific ARARs will be updated as the remedial alternatives are refined.

e. Conduct and Document Screening Evaluation of Each Alternative

The Respondents may perform a final screening process based on short and long term aspects of effectiveness, implementability, and relative cost. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives will be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis. As appropriate, the screening will preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives will include options that use treatment technologies and permanent solutions to the maximum extent practicable.

2. Development and Screening of Alternatives Deliverables

Within thirty (30) days after EPA's approval of the Baseline Risk Assessment for each AC, the Respondents shall: (1) make a presentation to EPA identifying the remedial action objectives and summarizing the development and preliminary screening of remedial alternatives, and (2) prepare and submit a Development and Screening of Remedial Alternatives Technical Memorandum for each AC which summarizes the work performed in, and the results of, each task above (C.1.a. through 1.e.), including an alternatives array summary. The memorandum shall also summarize the reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening. The memorandum shall also provide an explanation for choosing any institutional or engineering controls as part of any remedial alternative, and the level of effort that will be required to secure, maintain, and enforce the control. EPA may elect to comment on the memorandum. If required by EPA's written comments, the alternatives will be modified by the Respondents to assure that a complete and appropriate range of viable alternatives are identified and considered in the detailed analysis. This deliverable will document the methods, rationale, and results of the alternatives screening process.

3. Detailed Analysis of Remedial Alternatives

The detailed analysis will be conducted by the Respondents for each AC to provide EPA with the information needed to allow for the selection of remedies for the Site. This analysis is the final task to be performed by the Respondents during the FS.

a. Detailed Analysis of Alternatives

The Respondents shall conduct a detailed analysis of alternatives for each AC which will consist of an analysis of each option against a set of nine evaluation criteria and a comparative analysis

of all options using the same evaluation criteria as a basis for comparison.

b. Apply nine criteria and document analysis

The Respondents shall apply nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARS; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria are: (1) overall protection of human health and the environment; (2) compliance with ARARS; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State (or support agency) acceptance; and (9) community acceptance.

For each alternative, the Respondents should provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative, and (2) a discussion of the individual criterion assessment. If the Respondents do not have direct input on criteria (8) State (or support agency) acceptance and (9) community acceptance, these criteria will be addressed by EPA.

c. Compare Alternatives Against Each Other and Document the Comparison of Alternatives

H. FEASIBILITY STUDY REPORTS

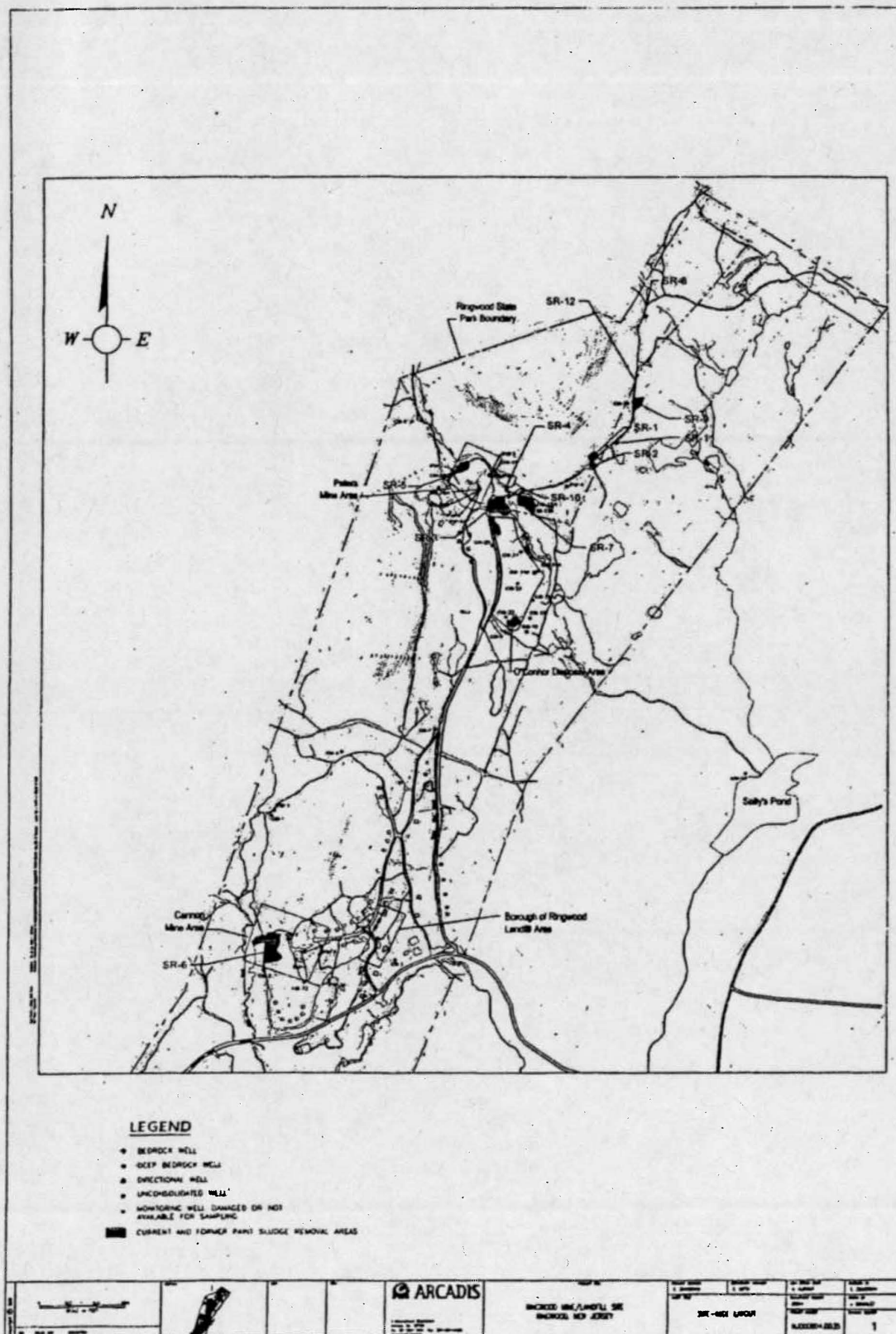
The Respondents shall prepare a FS Report for each AC, which consists of a detailed analysis of alternatives and a cost-effectiveness analysis, in accordance with the National Contingency Plan (NCP), 40 CFR Part 300, as well as the most recent guidance. Within forty-five (45) days of the presentation to EPA required under Section C.2 above, the Respondents shall submit to EPA a Draft FS report which reflects the findings in the approved Baseline Risk Assessment for the respective AC. The Respondents shall refer to the FS Work Plan and the RI/FS Guidance and this SOW for the draft FS report's content and format. Upon request by EPA or NJDEP, the Respondents will make a presentation to EPA and NJDEP which shall summarize the findings of the draft FS report and discuss EPA's preliminary comments and concerns associated with the draft FS report. Within twenty-one (21) days of receiving EPA's written comments, if any, on the draft FS report, Respondents shall prepare a revised FS report. Respondents shall then submit the revised FS report to EPA for approval pursuant to Section X

(EPA Approval of Plans and Other Submissions) of the Settlement Agreement, unless the Respondents are directed otherwise by EPA in writing.

1. The draft FS report and the Final FS report for each AC shall include the following:

- a. Summary of Feasibility Study objectives
- b. Summary of remedial action objectives
- c. Discussion of general response actions
- d. Identification and screening of remedial technologies
- e. Remedial alternatives description
- f. Detailed analysis of remedial alternatives and comparative analysis
- g. Summary and conclusions

The Respondents' technical feasibility considerations shall include the careful study of any problems that may prevent a remedial alternative from mitigating the contamination related to the four ACs at the Site. Therefore, the Site characteristics from the RI must be kept in mind as the technical feasibility of the alternatives is studied. Specific items to be addressed are reliability (operation over time), safety, operation and maintenance, ease with which the alternative can be implemented, and time needed for implementation.



APPENDIX B